ACS200/ACS250 LED Display

User Manual

Software Version 1.2

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ACS200/ACS250 Controls & Indicators

Note: There are two types of button presses on buttons ① and ②. A “Short Press” is of less than 0.4 Seconds Duration. A “Long Press” is of greater than 0.6 Seconds duration.

① - **Menu Button - ON Button** – *when long pressed inwards.* **Menu Item Selector** – *twist knob to cycle through menu items.* **Battery Percentage Readout** – *short press inwards activates a visual reading of the Sign's remaining battery percentage.*

② - **SELECT Button – OFF Button** - *twist knob to cycle through items in each menu (e.g. Group 1,2,3 or Squad 1,2…) long press the menu button to activate selected item.* **Status Readout** – *short press inwards to activate a Visual reading of each of the Sign's menu settings (Rounding, Time Lap,, Group, Squad, Channel).* **A long press on the Select button turn the LED sign off.**

③ - **Status LED** - *will flash when LED Sign is on; blue with more than 50% battery, green when less than 50% but more than 25% and red when less than 25%.*

④ - **Charging LED** – *will glow red when connected to a power source and charging.*

⑤ - **LED Display –** *shows lap times, modes, lane numbers, start messages and settings.*

⑦ - **USB Socket –** *connection to computer for software updates and result recording.*

⑧ - **Charging Port –** *connect 5V power supply to charge LED Display.* ***DO NOT CONNECT A LAPTOP POWERPACK AS DAMAGE MAY RESULT!***

1. Turning on and off

1.0: Turning unit on:

If the unit is off (Status LED ③ not flashing), long pressing the Menu Button ① will turn the unit on. The Status LED ③ will confirm that the unit is on by flashing .Upon start up the sign will display its Network ID and the current mode it is set in.

1.1: Turning unit off:

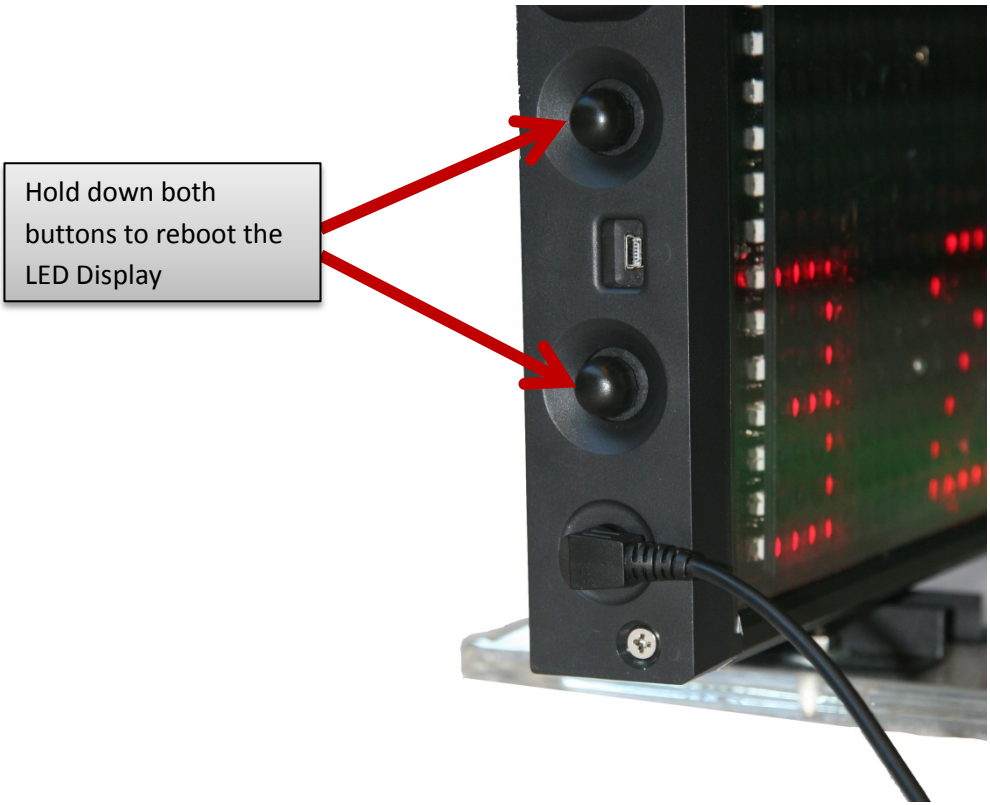
The unit will automatically turn off after approx. 45 minutes inactivity. Just before turning itself off it will display “Off!”. The unit can be manually shut down by long pressing the Select Button ②. The unit will display “Off!” as it turns off, and the Status LED ③ will stop flashing.

1.2: Battery Status:

When the unit’s battery falls below 50%, the Status LED ③ will turn from blue to green. When the battery falls below 25%, the Status LED ③ will start flashing red. At this point we recommend charging the Unit.

1.3: Resetting the unit:

The unit can be reset to default conditions by pressing buttons ① and ② simultaneously for more than approx. 10 Seconds. After a few seconds the unit will display “Off!” and after 5 or so more seconds, the Status LED will flash through a cycle of colours. After booting, the Sign will display the model (ACS250 or AC200) and the software version (or build date).



2. Connecting to your Smart Watch

1. To connect to your Smart Watch, first setup your Smart Watch by turning it on and finding the Setup Mode. In Setup Mode, set your Squad number and Channel number (e.g. Squad 2, Channel 15). *
2. Turn on your Display by holding down the Menu Button ① until the unit displays “On” and the Status LED ③ blinks. Proceed by rotating the Menu Dial ① until the LED Display shows “Squad”. Use the Select Dial ② and rotate until the Squad number matches your number used for in the Smart Watch (e.g. Squad 2), then long press the Menu Button ① until the LED Display confirms your selection by displaying “Save”.
3. Rotate the Menu Dial ① until the Speaker Unit announces “Channel”. From here, as in step 2, use the Select Dial ② and rotate until the Channel number matches your number used for in the Smart Watch (e.g. Channel 13), then long press Menu Button ① until the Display confirms your selection by reading “Save”.
4. Confirm your connection by starting a race in Master Race Mode on your Smart Watch and looking for the start commands on your display. The display will also operate in Watch and Speed modes, allowing use of the stopwatch without the speakers sounding and the displays are capable of displaying velocity splits and stroke rates, as well as time splits and race placings.

*Refer to ACS100 User Manual for detailed instructions regarding your Smart Watch

3. Connecting to Your Computer

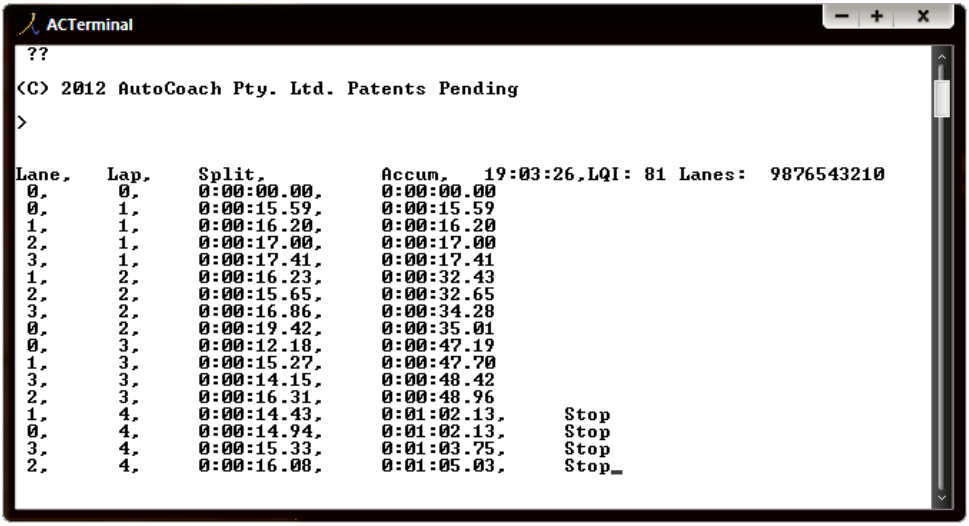
3.1: Recording results onto a computer

Windows PC's - Firstly, Install the ACTerminal program by running "setup" on your computer.(If you were supplied the file as a ZIP file you will need to Unzip it before trying to run it.) After installing the software, go to Start->All Programs->AutoCoach Pty Ltd->ACTerminal->Install USB Drivers and install the drivers required to work with the Autocoach devices. Please read the included readme.txt file in order to get the latest information regarding the program operation.

After installing the drivers, plug in the USB cable into the computer and let it detect and install the drivers. Now you can run the ACTerminal program by clicking on the ACTerminal shortcut on your desktop.

Now when another watch is in operation on the same squad number, ACTerminal will display watch results in real time.

An example data screen is as follows:



The screen data can be cut and pasted into a .csv file and imported to Microsoft Excel under import .csv file.

3.2 Race Results Interpretation:

The race results differ slightly depending on the Watch mode being used. Shown before was the Race Split mode, showing lanes 0, 1 ,2 and 3 in a four lap 25M pool race. The first line with lap #0 is the result immediately after the start beep, showing the results legend, the start time of the results and the received wireless signal strength (LQI – from 1 to 255). Any LQI over about 10 is sufficient for reliable operation. Finally a legend of the lane naming is shown, in this case lane 9 is on the left and lane 0 on the right. This can be changed under Setup->Lanes menu in the ACS100 SmartWatch.

3.3 Updating Firmware:

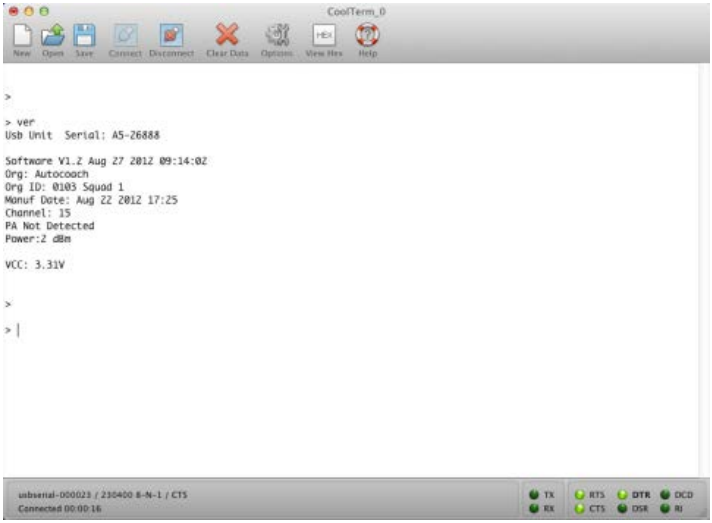
Either as part of the installation, or as an emailed or downloaded file you can update the firmware of an AutoCoach Device. Before upgrading, be sure to have at least 30 percent battery level remaining and do not operate any controls or other programs on your computer whilst the upgrade is in progress! After the command prompt is visible on the screen (>) press the F4 key on the computer. The red prompt is for the firmware filename. For version 1.2 the filename is acs250.v12 for an ACS250 Display. Enter the filename and wait a few minutes as the progress indicators display the upgrading status. After a successful upgrade, the unit will then reboot. ***Please see the ACTerminal Firmware update guide for more details.***

3.4 MAC Devices:

For use in a MAC, please download the free APP called CoolTermMac. From http://www.macupdate.com/app/mac/31352/coolterm Also you will need the FTDI USB driver from http://www.ftdichip.com/Drivers/VCP/MacOSX/FTDIUSBSerialDriver_v2_2_18.dmg or supplied by AutoCoach.

Install the driver first, then CoolTerm. Then Plug in your AutoCoach device into the MAC USB port and allow it to detect it and install its driver.

Then run CoolTerm and configure the Baud rate to 230400, CTS/RTS handshake enabled and select the virtual com port from the dropdown list. Then press "connect" and after a few seconds, the AutoCoach command prompt should appear.



4. LED Display Information

To activate Race Mode, rotate the Menu Dial ① until the Display shows “Race 0.01” and then hold down the Menu Button until the Display confirms the selection by displaying “Save”.

4.0 Smart Watch in Pace Mode:

The display will show a “On Marks” when Pace Mode is initiated on the watch and subsequently display the lanes and stopwatch accumulation.

4.1 Smart Watch in Master Race Mode

The LED Sign will display “Ready” when the starter’s whistle is activated on the watch, “on marks” when “take your marks is activated and will start displaying lanes and the race times when the Smart Watch starts the race. “Abort” will be displayed if the Smart Watch user decides to cancel the race.

Splits recorded by the watch will be displayed according to the corresponding lane and rounded to 0.1 seconds. Final times will be rounded to 0.01 seconds on the ACS250, or to the nearest .1 seconds on the ACS200.

4.2 Smart Watch in Master Interval Mode:

As per Pace Mode, the LED Display will read “On Marks” when the watch announces “Take Your Marks” and subsequently display the lanes and stopwatch accumulation after the “Go” beep.

Times recorded by the watches will be displayed in their corresponding lanes and rounded to 0.1 seconds.

4.3 Smart Watch in Watch Mode:

Although the Speaker makes no sounds in the ACS100 Watch or Speed modes, the LED display shows the primary information the ACS100 displays, allowing the coach to watch the sign and not look down at their watch. Also the Athlete can see the display, eliminating the need for the coach to yell out the result.

Stroke rate displayed on an ACS250

Stroke rate on an ACS200 is rounded to nearest integer

4.4 Smart Watch in Speed Mode:

In addition to times and stroke rates, in Speed mode split times are not displayed, but split velocities are as shown below.

ACS250 displaying 1.23 Meters per second velocity split.

ACS200 displaying 2.84 Meters per second velocity split.

5. Other Menu Items

5.0 Time:

To reach Time, rotate the Menu Dial ① until the Display shows “Time”. From here, long press the Menu Dial until the Display confirms the selection by showing “Save”.Time Mode simply displays the current time in hh:mm:ss. Time mode will be suspended automatically upon any connected ACS100 watch starting a timing event, and will automatically resume after the Watch has become inactive.

5.1 Lap Clock:

To reach Lap Clock, rotate the Menu Dial ① until the Display shows “Lap Clock”. From here, long press the Menu Dial until the Display confirms the selection by showing “Save”.

The Lap Clock will display two clocks showing seconds with a 30 second delay in between each clock. To synchronise your Lap clock time with that of the swimming centres, wait till the pace clock is at 12'O clock and then short press the Menu button ① to reset the lap clock display to zero seconds.

5.2 Group:

To reach Group, rotate the Menu Dial ① until the Display shows "Group". From here, use the Select Dial ② to choose a desired group and hold down the Menu Button ① until the Display confirms the selection by showing "Save".

5.3 Squad:

To reach Squad, rotate the Menu Dial ① until the Display shows "Squad". From here, use the Select Dial ② to choose a desired group and hold down the Menu Button ① until the Display confirms the selection by showing "Save".

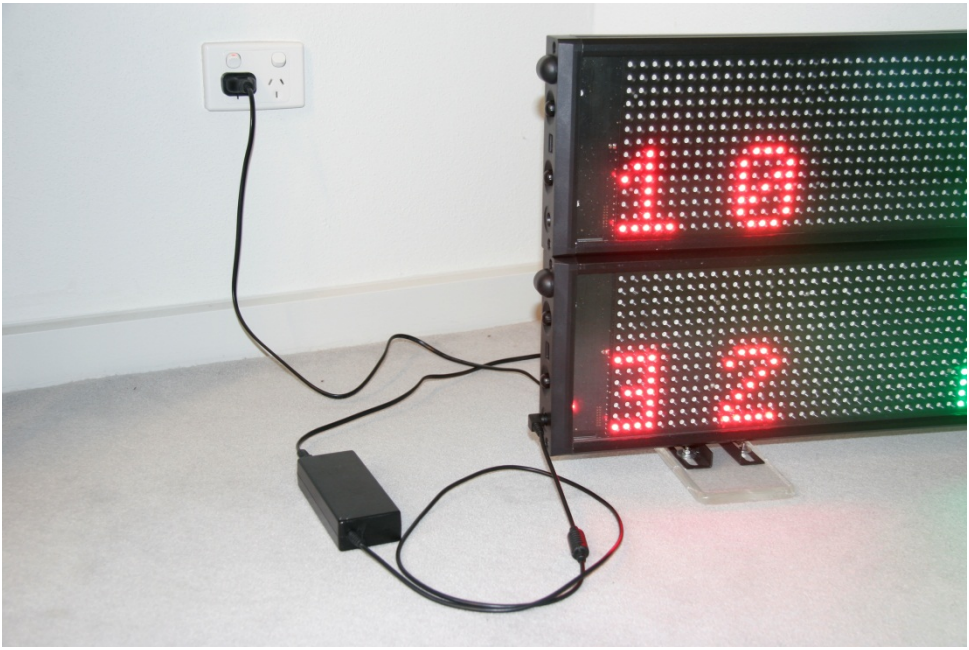
5.4 Channel:

To reach Channel, rotate the Menu Dial ① until the Display shows "Group". From here, use the Select Dial ② to choose a desired group and hold down the Menu Button ① until the Display confirms the selection by showing "Save".

6. Charging the battery

6.1 AC Adapter:

The ACS200/ACS250 Wireless Speaker Hub can be recharged with the supplied AC Adapter (5V 4000mA USB socket), or by connecting the unit to a PC or MAC via the supplied USB cable.



From 0% Battery level, charging usually completes within 3 hours. We recommend recharging when the battery level is below 30%, in order to be confident you have enough power for a day's usage.

7. Caring for your AutoCoach device

7.1 Storage:

Try to store in as dry and cool a place as possible. Always stand the LED Display on its base and take care not to drop the unit on hard surfaces. Protective carry cases are also available for both LED Display models.

7.2 Handling:

LED Display Unit is water RESISTANT, and NOT water proof. Do not submerge the ACS200/ASC250. After usage around splash areas, make sure to shake water out of the unit and wipe off remaining droplets.

7.3 Resetting:

If the program fails to respond or the device will not turn on, try performing a Reboot as per Section 1.3. Please record what you were doing when the problem happened and report to us in order for the problem to be investigated.

When resetting the device, the settings will reset to their default values: Race mode, Squad 1 and Channel 15. These default values will match the default values of your Smart Watch and is useful if you're having trouble connecting the two devices or have forgotten either of the devices' settings.

ACS200 Display in its case

ACS250 Display in its travel case